houses on mortgage, is evidently liable to great objections. *Competition* should certainly not be an element in any mutual benefit association.

The objection might be obviated by introducing the principle of mutual assurance into such schemes; and this would be much more simple, and not less profitable to a company; i. e., advance 1,000*l.* to A, B, or C, to be invested in building a house, he paying interest for the loan, together with the ordinary *premium* for insuring 1,000*l.*, at the end of a certain number of years (or at his death, if his demise is to leave an unburdened property to his children), *on mortgage*.

FIRE INSURANCE.

We some time since invited attention (No. 8) to the subject of insurance against loss by fire, and its very great importance to builders, shewing, at the same time, the interest and influence held by architects and surveyors in much that relates both to the security of the offices and proprietors of house property and merchandize. The occurrence of another extensive fire at Liverpool revives public alarm, while the calls upon the exchequers of several of the offices will not fail to rouse the apathy even of those who may still have a long line of significant figures to their credit in funds, annuities, and mortgages, to a sense of the insecurity of the large stake at issue represented by the premiums in hand; and we very respectfully refer the directors of these institutions to the above number of THE BUILDER, convinced that our previous observations bear stringently on the calamity that has just occurred. If we may credit the newspaper accounts, large warehouses, stored with many thousand bales of cotton, were in near contiguity to vaults crammed with saltpetre: a single spark, therefore, whether from the lantern of the most careful servant, or from the match of a felon incendiary, was sufficient to cause this devastation of property. Will this second or third visitation upon the merchants of Liverpool, and through them upon the insurance offices, originate no measures of concert for fire-proof buildings, and the assignment of special localities for warehousing goods of hazardous kinds? The reply can hardly be a negative. And the example would be quickly followed by London and the other great warehousing ports of the empire.

Now, with respect to the rate of premium for assurance against fire, we again call attention to it. We have said before, that it is to be presumed that this rate is governed by losses occurring upon an average of years throughout the sphere to which the business of the offices extends; but this datum, even if it exists, is inaccessible, and moreover *fallacious*; for it would not apply unless the premiums were accumulated into, and the losses paid out of, one common fund. The public, if they inquire at all, are therefore left to do so by collating from other sources a method of approximating to the advantages or otherwise of the species of insurance to the parties engaged in it. To give a passing idea of the effect of a single great fire, such as that of last week at Liverpool (where the loss is variously estimated at from 45,000*l.* (the lowest) to 80,000*l.*), upon the premiums received by the whole of the offices for one year, it may be assumed, which is nearly the fact, that the total amount of property insured is six hundred and fifty millions of all rates or classes of premium; viz. 1s. 6d. per cent. for common insurances, 2s. 6d. hazardous, and 4s. 6d. doubly hazardous. Now, taking the loss at Liverpool at a medium, or 65,000*l.*, and admitting the whole to have been received as hazardous, at 2s. 6d. per cent., we find that the premiums upon fifty-two millions of assurances are swept away at a single blow. We are, of course, far from pretending to any thing like accuracy in this sketch, but it is a sort of inductive process to a better understanding of the subject at large, which we will endeavour to render still more intelligible when we next recur to it.

GOTHIC STAIRCASE, &c.,

TO THE EDITOR OF THE BUILDER.

SIR,—Being a reader of your valuable work ever since its issue, it may not be unbecoming in me to express my most ardent wish for its continuance, and I should feel happy to find more food for the mind of the workman as well as the architect, I mean the workmen whose limited means are far beyond the reach of the practical works they require; and as your magazine is the only publication that is within the reach of the class I allude to, I sincerely hope that your correspondents will not fail to do their duty in diffusing that knowledge that is required amongst our class of the present day; such as following up the sections of cornices, as in Nos. 7 and 10. As Mr. W. has shewn full entablatures, I beg to correct an error in Fig. 2, No. 10. It is the Composite or Roman ornament. But the section is out of all character, as the Roman cornice is at all times executed with modillion, so that the plancere must be level, and of greater projection, and the cornice to come down to receive the enriched panels in the intervals of the modillions. It would be well if Mr. W., in following up his works, would give the proper rules of proportion to each order, as it is the principal feature of all orders. In conversing with a carpenter, who considered that it required as much talent as draughtsmanship in describing the orders of Roman architecture, it was his opinion that diameters, modules, minutes, &c. were Roman measurements, so that we must employ our own rule; so long as this is the case, we never shall get rid of those bad examples that are daily eyesores to those who can see the want of proportion. For instance, supposing a mason had to ornament a window with architraves and cornice, he must consider the height of the opening, the shaft of a column divided into 8 parts or 16 modules, 2 parts or 4 modules will be the height of the entablature, which must be divided into 8 parts. 2 parts for the architrave to be run round the window, 3 parts for the frieze, the remaining 3 to be divided into minutes for the cornice.

As time will not allow me to dwell longer on this subject, I must leave it in the hands of Mr. W., and enter on one of more importance. As a professor of ancient and modern staircasing, and feeling it my duty to lay before your readers proper plans and instructions in an art that has been for so many years worked, in a manner, secretly, notwithstanding the experienced works that have been published by Nicholson, Kelly, and others, whose great confusion of lines only tend to puzzle the student rather than instruct him. After the great expense he has been at in purchasing the works, he commences tracing the lines, figures, letters, &c. until he becomes bewildered and confused; after all, he puts down the work, and declares that if it is not all French to the publisher, it is to him, so that he pursues it no longer.

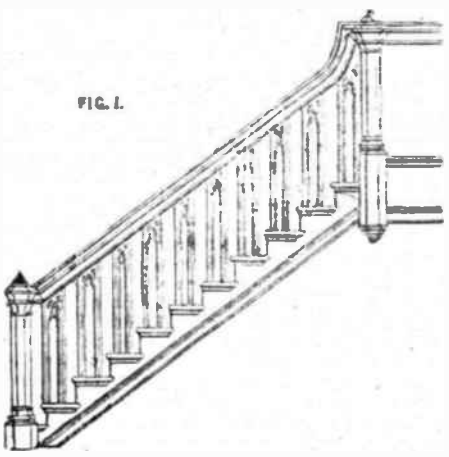

FIG. 1.

Gothic Staircase.

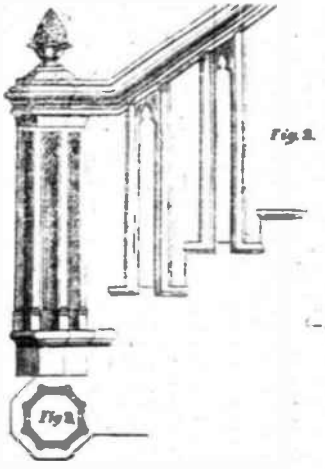

Fig. 2.

Fig 3.

Gothic Newels and Bannisters

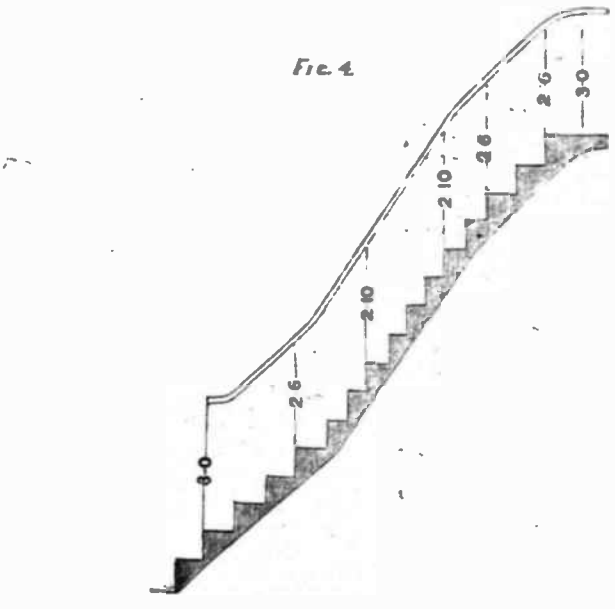

FIG. 4.

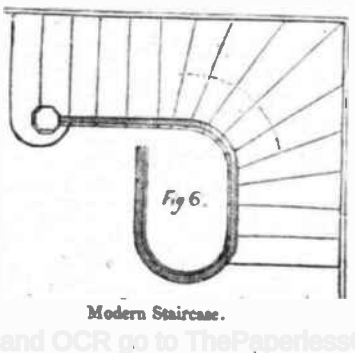

Fig 6.

Modern Staircase.

Fig. 1 shews a part of a Gothic staircase, with one open bannister on each step, and octagon newels with the rail mitred round, forming the cap.

Fig. 2 shews octagon open worked newels, with staff beads on the angles, with turned bases; the nosing is returned, and forms the bannisters, mitred in a staff bead at the under side of the rail. The plan for getting tracery for the bannisters and newels, and for getting the heights and ramps for rail, I will shew in the next number.

Fig. 6 is a modern staircase with winders, which I will continue to some length in your next number, to shew that the system of springing is not required over winders.

We have omitted Fig. 5, intending to insert it in our next correspondence.

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